6KE8

Medium-Mu Triode—Sharp-Cutoff Pentode

9-PIN MINIATURE TYPE

FRAME-GRID PENTODE

For Combined Oscillator-Mixer Applications in TV Receivers Having an IF of 40 Mc

GENERAL DATA

Electrical:

Heater Characteristics and Ratings:			
Voltage (AC or DC)	6.3 ± 0.6		volts
Current at heater volts = 6.3	0.400		amp
Peak heater-cathode voltage (Each unit):			
Heater negative with respect to cathode	200	max.	volts
Heater positive with respect to cathode	200[a]	max.	volts
Direct Interelectrode Capacitances:[b]			
Triode Unit:			
Grid to plate	1.3		pf
Grid to cathode, pentode cathode & pentode grid No.3 & internal shield, and heater	2.4		pf
Plate to cathode, pentode cathode & pentode grid No.3 & internal shield, and heater	2.0		pf
Pentode Unit:			
Grid No.1 to plate	0.015	max.	pf
Grid No.1 to cathode & grid No.3 & internal shield, grid No.2, and heater	5.0		pf
Plate to cathode & grid No.3, & internal shield, grid No.2, and heater	3.4		pf
Heater to triode cathode and pentode cathode	5.5[c]		pf

Characteristics, Class A₁ Amplifier:

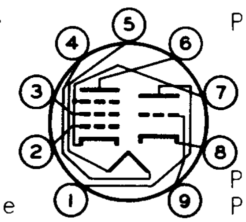
	Triode Unit	*Pentode Unit*	
Plate Supply Voltage	125	125	volts
Grid-No.2 Supply Voltage	–	125	volts
Cathode Resistor	68	33	ohms
Amplification Factor	40	–	
Plate Resistance (Approx.)	5000	125000	ohms
Transconductance	8000	12000	μmhos
Plate Current	13	10	ma
Grid-No.2 Current	–	2.8	ma

Grid-No.1 Voltage (Approx.) for plate μa =			
100	-5	–	volts
50	–	-3	volts

Mechanical:

Operating Position . . . . Any
Type of Cathodes . . . . Coated Unipotential
Maximum Overall Length . . . . 2-3/16"
Maximum Seated Length . . . . 1-15/16"
Length, Base Seat to Bulb Top (Excluding tip) . . 1-9/16" ± 3/32"
Diameter . . . . 0.750" to 0.875"
Dimensional Outline . . . . See *General Section*
Bulb T6-1/2
Base . . . . Small-Button Noval 9-Pin (JEDEC No.E9-1)
Basing Designation for BOTTOM VIEW 9DC

Pin 1 - Triode Plate
Pin 2 - Pentode Grid No.1
Pin 3 - Pentode Grid No.2
Pin 4 - Heater
Pin 5 - Heater
Pin 6 - Pentode Plate



Pin 7 - Pentode Cathode, Pentode Grid No.3, Internal Shield
Pin 8 - Triode Cathode
Pin 9 - Triode Grid

AMPLIFIER — Class A$_1$

Maximum Ratings, *Design-Maximum Values:*

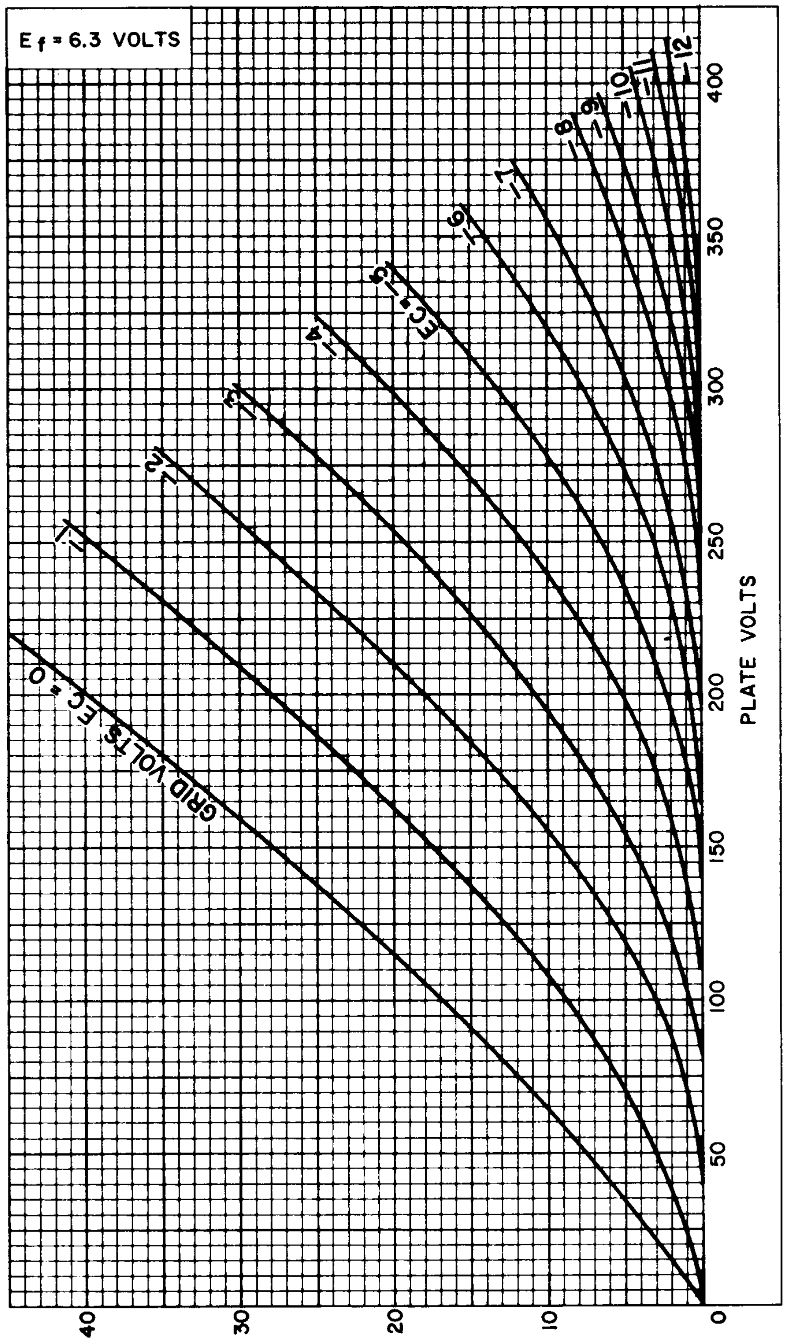
	Triode Unit	*Pentode Unit*	
PLATE VOLTAGE	280 max.	280 max.	volts
GRID-No.2 SUPPLY VOLTAGE	–	280 max.	volts
GRID-No.2 VOLTAGE	–	See *Grid-No.2 Input Rating Chart* at front of Receiving Tube Section	
GRID-No.1 VOLTAGE:			
Positive-bias value	0 max.	0 max.	volts
CATHODE CURRENT	20 max.	20 max.	ma
GRID-No.2 INPUT:			
For grid-No.2 voltages up to 140 volts	–	0.5 max.	watt
For grid-No.2 voltages between 140 and 280 volts	–	See *Grid-No.2 Input Rating Chart* at front of Receiving Tube Section	
PLATE DISSIPATION	2 max.	2 max.	watts

Maximum Circuit Values:

	Triode Unit	*Pentode Unit*	
Grid-No.1-Circuit Resistance:			
For fixed-bias operation	0.5 max.	0.25 max.	megohm
For cathode-bias operation	1 max.	0.5 max.	megohm

[a] The dc component must not exceed 100 volts.
[b] With external shield JEDEC No.315 connected to cathode of unit under test except as noted.
[c] With external shield JEDEC No.315 connected to ground.

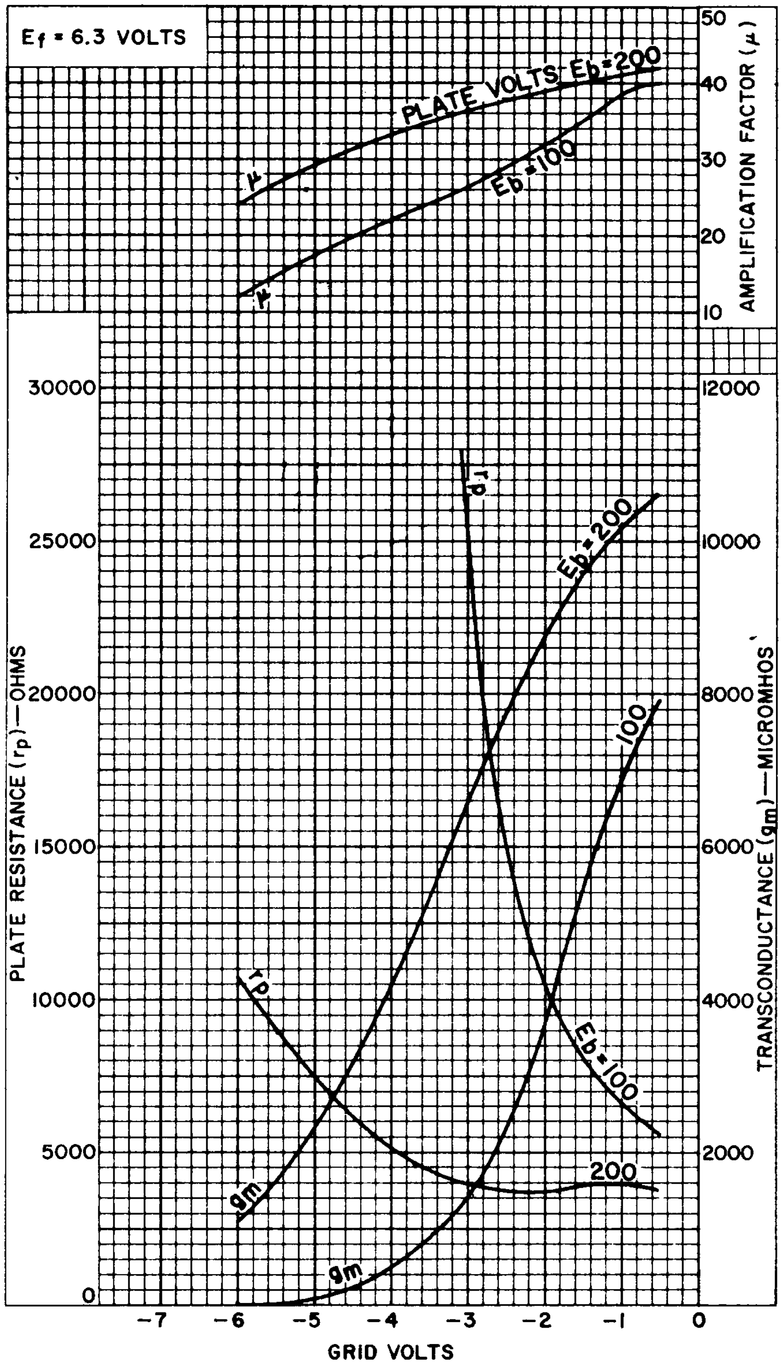
AVERAGE PLATE CHARACTERISTICS
Triode Unit



92CM-11897

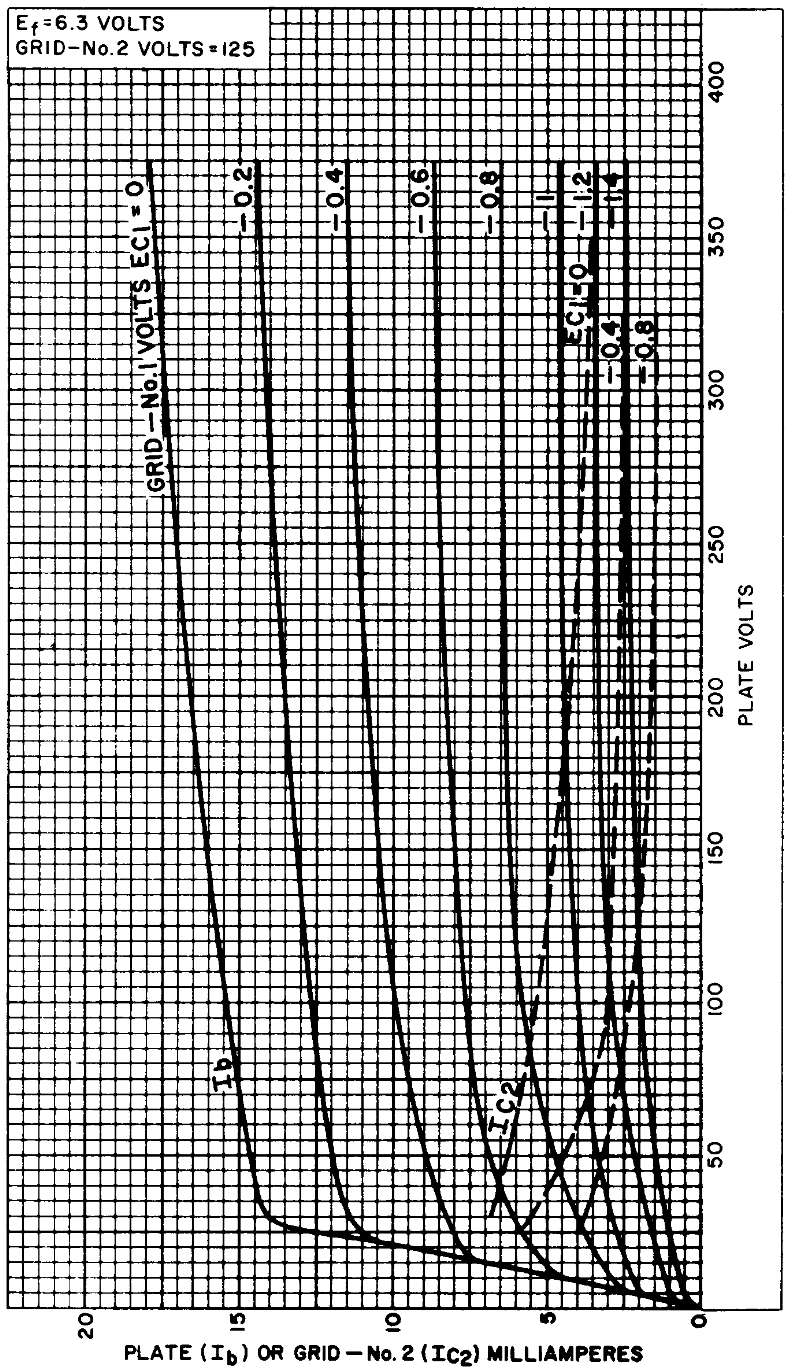
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AVERAGE CHARACTERISTICS
Triode Unit



92CM—11901

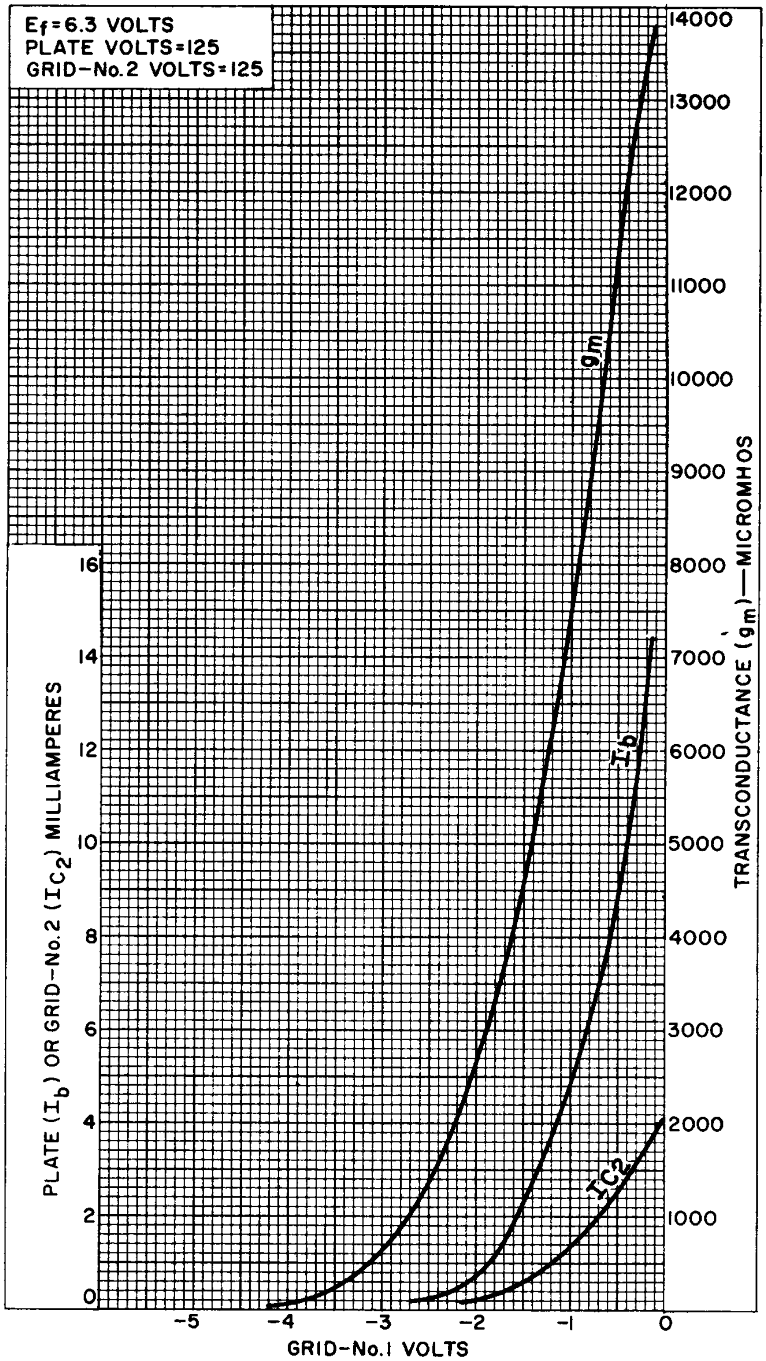
AVERAGE CHARACTERISTICS
Pentode Unit



92CM-11903

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AVERAGE CHARACTERISTICS
Pentode Unit



92CM-11902